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PATENT  
Attorney Docket No.: 10577-37  
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

VOLKER SCHMIDT

Application No.: 08/836,369

Filed: October 20, 1997

For: TEMPERATURE-  
MEASUREMENT INSTRUMENT WITH  
DIFFRACTIVE OPTICS

Examiner: A. Hirshfeld

Art Unit: 2859

COMMUNICATION AND REQUEST  
FOR INTERFERENCE UNDER 37 C.F.R.  
§1.607(a)

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Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

As required by 37 C.F.R. §1.607, applicant is requesting that an interference be declared between the present application and U.S. Patents 5,823,678 and 5,823,679 (referred to herein respectively as the '678 and '679 patents). The claims of the '678 patent were copied into the application as claims 16-28 and the claims of the '679 patent were copied into the application as claims 29-81 in an amendment filed November 25, 1998.

The following presents the information required by §1.607(a).

**I. The '678 Patent**

a) §1.607(a)(1)

Applicant seeks to provoke an interference with U.S. Patent 5,823,678.

b) §1.607(a)(2)

Applicant proposes the following two counts:

Count 1

(a) A method for outlining an energy zone on a surface whose temperature is to be measured using the combination of a radiometer and a laser aiming device, said method comprising the steps of providing said laser device associated with said radiometer, and causing said device to emit simultaneously a plurality of more than two laser beams towards said surface to strike said surface at individual mutually spaced locations to outline said energy zone;

OR

(b) A combination of a radiometer and apparatus for outlining an energy zone on a surface whose temperature is to be measured using said radiometer, said apparatus comprising: a laser sighting device cooperating with said radiometer, said laser sighting device including a device for emitting simultaneously a plurality of more than two laser beams to strike said surface at individually spaced apart locations serving to outline said energy zone.

Count 2

(a) A method for identifying the extent of a radiation zone on an area whose temperature is to be measured using a radiometer, said method comprising the steps of:

providing a sighting device for use in combination with said radiometer, said device generating a laser beam;

providing a diffraction device as part of said sighting device; and

simultaneously splitting said laser beam with said diffraction device into more than two beams, and positioning said beams toward said area to identify the extent of said radiation zone;

OR

(b) Apparatus in combination with a radiometer for identifying a radiation zone in an area whose temperature is to be measured using said radiometer, said apparatus comprising a laser sighting device in combination with said radiometer, said laser sighting device including:

a device for generating a laser beam;  
a diffraction device for splitting said laser beam into more than two beams; and  
a device for simultaneously positioning said more than two beams to outline the periphery of said radiation zone.

c) §1.607(a)(3)

Claim 1 of the '678 patent corresponds exactly to the method part of proposed Count 1 and claim 3 of the '678 patent corresponds exactly to the apparatus part of proposed Count 1.

Claim 7 of the '678 patent corresponds exactly to the method part of proposed Count 2 and claim 9 of the '678 patent corresponds exactly to the apparatus part of proposed Count 2.

d) §1.607(a)(4)

Claim 16 of the application corresponds exactly to the method part of proposed Count 1 and claim 18 corresponds exactly to the apparatus part of proposed Count 1.

Claim 22 of the application corresponds exactly to the method part of proposed Count 2 and claim 24 corresponds exactly to the apparatus part of proposed Count 2.

e) §1.607(a)(5)

The following applies the terms of the application claims corresponding to the proposed counts to the specification:

Claim 16 - Proposed Count 1(a)	SPECIFICATION
A method for outlining an energy zone on a surface whose temperature is to be measured using the combination of a radiometer and a	The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). A sighting arrangement 5 identifies the

laser aiming device, said method comprising the steps of	position and size of the measurement spot 2a on the object (page 8, lines 15-26).
providing said laser device associated with said radiometer,	The laser aiming device includes a sighting arrangement 5 (page 8, lines 15-26). Light source 5a can be a laser (page 8, lines 27-28).
and causing said device to emit simultaneously a plurality of more than two laser beams towards said surface to strike said surface at individual mutually spaced locations to outline said energy zone.	Sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object 2 (figure 1 and pages 8-10). Figures 2b and 2d show more than two beams at individual mutually spaced locations on the surface outlining the measurement spot.

Claim 18 - Count 1(b)	SPECIFICATION
A combination of a radiometer and apparatus for outlining an energy zone on a surface whose temperature is to be measured using said radiometer, said apparatus comprising:	The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). A sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object (page 8, lines 15-26).
a laser sighting device cooperating with said radiometer, said laser sighting device including a device for emitting simultaneously a plurality of more than two laser beams to strike said surface at individually spaced apart locations serving to outline said energy zone.	The laser sighting device includes a sighting arrangement 5 (page 8, lines 15-26). Light source 5a can be a laser (page 8, lines 27-28). Sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object 2 (figure 1 and page 8-10). Figures 2b and 2d show more than two beams at individually spaced apart locations on the surface outlining the measurement spot.

Claim 22 - Proposed Count 2(a)	SPECIFICATION
A method for identifying the extent of a radiation zone on an area whose temperature is to be measured using a radiometer, said method comprising the steps of:	The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). A sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object (page 8, lines 15-26).
providing a sighting device for use in combination with said radiometer, said device generating a laser beam;	A sighting arrangement 5 is included for identifying the position and size of the measurement spot 2a (page 8, lines 15-26). The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). Sighting arrangement 5 includes a light source 5a (page 8, lines 18-19). Light source 5a can be a laser (page 8, lines 27-28).
providing a diffraction device as part of said sighting device; and	Sighting arrangement 5 includes a "diffractive optical system" (page 8, lines 18-21).
simultaneously splitting said laser beam with said diffraction device into more than two beams, and positioning said beams toward said area to identify the extent of said radiation zone.	Sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object 2 (figure 1 and page 8, lines 15-18). Figures 2b and 2d show the beam split into more than two beams, the beams identifying the extent of the measurement spot.

Claim 24 - Proposed Count 2(b)	SPECIFICATION
Apparatus in combination with a radiometer for identifying a radiation zone in an area whose temperature is to be measured using	The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). A sighting arrangement 5 identifies the

said radiometer, said apparatus comprising	position and size of the measurement spot 2a on the object (page 8, lines 15-26).
a laser sighting device in combination with said radiometer, said laser sighting device including:	A sighting arrangement 5 is included for identifying the position and size of the measurement spot 2a (page 8, lines 15-26). The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14).
a device for generating a laser beam;	Sighting arrangement 5 includes a light source 5a (page 8, lines 18-19). Light source 5a can be a laser (page 8, lines 27-28).
a diffraction device for splitting said laser beam into more than two beams; and	Sighting arrangement 5 includes a "diffractive optical system" (page 8, lines 18-21).
a device for simultaneously positioning said more than two beams to outline the periphery of said radiation zone.	Sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object 2 (figure 1 and page 8, lines 15-18). Figures 2b and 2d show the beam split into more than two beams, the beams identifying the extent of the measurement spot.

f) §1.607(a)(6)

The '678 patent issued on Oct. 20, 1998. The claims of the '678 patent were entered into the present application on November 25, 1998, less than a year after the issuance of the '678 patent, thereby meeting the requirements of 35 U.S.C. §135(b).

**II. The '679 Patent**

a) §1.607(a)(1)

Applicant seeks to provoke an interference with U.S. Patent 5,823,679.

b) §1.607(a)(2)

Applicant proposes the following two counts:

Count 1

(a) A method for outlining an energy zone on a surface whose temperature is to be measured using the combination of a temperature measurement device and a laser sighting device, said method comprising the steps of providing a laser sighting device associated with said temperature measurement device and causing said laser device to emit a plurality of at least three laser beams toward said surface to strike said surface simultaneously at mutually spaced locations serving to outline said energy zone;

OR

(b) The combination of a temperature measurement device and an apparatus for outlining an energy zone on a surface whose temperature is to be measured using said temperature measurement device, said apparatus comprising a laser sighting device co-operating with said temperature measurement device for emitting at least one primary laser beam toward said surface, and for producing a plurality of at least three laser beams from said primary laser beam to strike said surface simultaneously at spaced apart locations serving to outline said energy zone.

Count 2

(a) A method for outlining an energy zone on a surface whose temperature is to be measured using the combination of a temperature measurement device and a sighting device, said method comprising the steps of providing a laser sighting device and a temperature measurement device, causing said laser device to emit at least one primary laser beam, passing said primary laser beam across a diffraction grating to subdivide said primary beam into a plurality of at least three secondary laser beams, and directing said secondary laser beams toward said surface to strike said surface simultaneously at spaced locations serving to outline said energy zone.

OR

(b) The combination of a temperature measurement device and a laser sighting device for outlining an energy zone on a surface whose temperature is to be measured using said temperature measurement device, said laser sighting device co-operating with said temperature measurement device, said sighting device projecting at least one primary laser beam toward said surface, and a diffraction beam splitter disposed between said laser sighting device and said surface to be struck by said primary laser beam to subdivide said primary beam into a plurality of at least three secondary laser beams to strike said surface simultaneously at spaced apart locations serving to outline said energy zone.

c) §1.607(a)(3)

Claim 1 of the '679 patent corresponds exactly to the method part of proposed Count 1 and claim 4 of the patent corresponds exactly to the apparatus part of proposed Count 1.

Claim 3 of the '679 patent corresponds exactly to the method part of proposed Count 2 and claim 9 of the patent corresponds exactly to the apparatus part of proposed Count 2.

d) §1.607(a)(4)

Claim 29 of the application corresponds exactly to the method part of proposed Count 1 and claim 32 corresponds exactly to the apparatus part of proposed Count 1.

Claim 31 of the application corresponds exactly to the method part of proposed Count 2 and claim 37 corresponds exactly to the apparatus part of proposed Count 2.

e) §1.607(a)(5)

The following applies the terms of the application claims corresponding to the proposed counts to the specification:

Claim 29 - Proposed Count 1(a)	SPECIFICATION
A method for outlining an energy zone on a surface whose temperature is to be measured using the combination of a temperature	The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). A sighting arrangement 5 identifies



measurement device and a laser sighting device, said method comprising the steps of	the position and size of the measurement spot 2a on the object (page 8, lines 15-26).
providing a laser sighting device associated with said temperature measurement device	The laser sighting device includes a sighting arrangement 5 (page 8, lines 15-26). Light source 5a can be a laser (page 8, lines 27-28).
causing said laser device to emit a plurality of at least three laser beams toward said surface to strike said surface simultaneously at mutually spaced locations serving to outline said energy zone.	Sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object 2 (figure 1 and pages 8-10). Figures 2b and 2d show more than two beams at individual mutually spaced locations on the surface outlining the measurement spot.

Claim 32 - Proposed Count 1(b)	SPECIFICATION
The combination of a temperature measurement device and an apparatus for outlining an energy zone on a surface whose temperature is to be measured using said temperature measurement device, said apparatus comprising	The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). A sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object (page 8, lines 15-26).
a laser sighting device co-operating with said temperature measurement device for emitting at least one primary laser beam toward said surface,	The laser sighting device includes a sighting arrangement 5 (page 8, lines 15-26). Light source 5a can be a laser (page 8, lines 27-28). Sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object 2 (figure 1 and page 8-10).
and for producing a plurality of at least three laser beams from said primary laser beam to	Figures 2b and 2d show more than two beams at individually spaced apart

strike said surface simultaneously at spaced apart locations serving to outline said energy zone.	locations on the surface outlining the measurement spot.
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Claim 31 - Proposed Count 2(a)	SPECIFICATION
A method for outlining an energy zone on a surface whose temperature is to be measured using the combination of a temperature measurement device and a sighting device, said method comprising the steps of	The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). A sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object (page 8, lines 15-26).
providing a laser sighting device and a temperature measurement device, causing said laser device to emit at least one primary laser beam,	A sighting arrangement 5 is included for identifying the position and size of the measurement spot 2a (page 8, lines 15-26). The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). Sighting arrangement 5 includes a light source 5a (page 8, lines 18-19). Light source 5a can be a laser (page 8, lines 27-28).
passing said primary laser beam across a diffraction grating to subdivide said primary beam into a plurality of at least three secondary laser beams, and	Sighting arrangement 5 includes a "diffractive optical system" (page 8, lines 18-21).
directing said secondary laser beams toward said surface to strike said surface simultaneously at spaced locations serving to outline said energy zone.	Sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object 2 (figure 1 and page 8, lines 15-18). Figures 2b and 2d show the primary beam split into at least three secondary beams at spaced locations, the beams identifying the extent of the measurement spot.

Claim 37 - Proposed Count 2(b)	SPECIFICATION
The combination of a temperature measurement device and a laser sighting device for outlining an energy zone on a surface whose temperature is to be measured using said temperature measurement device, said laser sighting device co-operating with said temperature measurement device,	The radiometer includes detector 1 and infrared imaging system 4 (page 8, lines 9-14). A sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object (page 8, lines 15-26).
said sighting device projecting at least one primary laser beam toward said surface,	Sighting arrangement 5 includes a light source 5a (page 8, lines 18-19). Light source 5a can be a laser (page 8, lines 27-28).
and a diffraction beam splitter disposed between said laser sighting device and said surface to be struck by said primary laser beam to subdivide said primary beam into a plurality of at least three secondary laser beams to strike said surface simultaneously at spaced apart locations serving to outline said energy zone.	Sighting arrangement 5 includes a "diffraction optical system" (page 8, lines 18-2). Sighting arrangement 5 identifies the position and size of the measurement spot 2a on the object 2 (figure 1 and page 8, lines 15-18). Figures 2b and 2d show the primary beam split into at least three secondary beams at spaced apart locations, the beams identifying the extent of the measurement spot.1).

f) §1.607(a)(6)

The '679 patent issued on Oct. 20, 1998. The claims of the '679 patent were entered into the present application on November 25, 1998, less than a year after the issuance of the '678 patent.

**III. Conclusion**

In view of the above, it is respectfully requested that an interference between the '678 and '679 patents and the present invention be declared.

If the Examiner believes a telephone conference would expedite matters, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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